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NEARCTIC SPIDERS OF THE GENUS *CICURINA* MENGE

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The purpose of this paper is to furnish a key and descriptions to the eighteen American species of *Cicurina* found north of Mexico. No specimens of *Cicurina nevadensis* Simon, *C. ludoviciana* Simon, *C. placida* Banks, *C. breviaria* Bishop and Crosby, and *C. cavealis* Bishop and Crosby have been available during this study, and the key does not include the first two mentioned. The other species are placed in the key on diagnoses taken from original descriptions and figures. The American species of this genus represent the majority of known cicurinas, the genotype *Cicurina cicurea* Fabricius being the only Palearctic species (Reimoser[2]), and *Cicurina madrynensis* Tullgren being a Patagonian species (Petrunkevitch, 1911).

The morphological material dealing especially with the secondary sexual organs of the female, although somewhat cumbersome, has been included as a necessary foundation for separating closely allied species.

BIONOMY OF SPECIES OF *CICURINA*

The habitat of the spiders of this genus is much the same as for many of the other Agelenidae. They are usually found in a cut-over or less dense woods, in rotting logs, or under boards or stones. Their webs are very delicate and fine, and they build no silken retreat. They are seldom seen in the daytime unless their habitation is disturbed. The most outstanding peculiarity of their life history has been noticed in connection with their maturation, which seems to occur at almost any time of year. Mature specimens of the Pacific Coast species of *Cicurina* have been collected in western Washington during all seasons. The climate of the latter district is seldom extreme and usually moist, but it is not common for most of the spider fauna to be mature during more than one or two seasons of the year. *Cicurina pusilla* Simon has been collected in February, March, April, May, August, September, and December; *Cicurina idahoana* Chamberlin in March, July, September, and December; *Cicurina simplex* Simon in May, July, September, and October. Eastern species are also mature during a large portion of the

[1] University of Washington.
[2] Reimoser, 1919, Abhandl. Zool.-Bot. Ges. Wien, Band X, Heft 2, p. 140.

year: mature specimens of *Cicurina robusta* Simon have been collected in March, April, May, June, July, August, September, October, and November.

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CICURINA MENGE

MENGE, 1869, Preuss. Spinnen, IV, p. 272.
BANKS, 1905, The American Naturalist, XXXIV, p. 308.
COMSTOCK, 1913, 'The Spider Book,' pp. 584, 595, and 596.

The species of *Cicurina* present a group of Agelenidae with the hind spinnerets two-segmented, the apical segment of each of which is shorter than the basal segment, and eight eyes of approximately the same size. *Cicurina* differs from the nearest related genus, *Cryphoeca*, in having the anterior median eyes nearly as large as the others, and the clypeus higher than the diameter of the anterior lateral eyes. The two genera are closely allied in these respects, however, by such species as *Cicurina atomaria* Simon in which the anterior median eyes are very small, and perhaps by *Cicurina tersa* and *pusilla* Simon in which the width of the clypeus is very slightly greater than the diameter of the anterior lateral eyes.

GENOTYPE.—*Cicurina cicurea* (Fabricius).

Cicurina cicurea (Fabricius)

Aranea cicurea FABRICIUS, 1793, 'Entomologia Systematica,' II, p. 410.

Cephalothorax moderately rounded, narrowing to form cephalic division; chelicerae very slightly geniculate, with three teeth followed by several denticles on the lower margin of the furrow; anterior tibiae with 2–2 ventral spines, and three lateral spines on inner side; anterior eyes subequal in size and almost equidistant; posterior eyes subequal

in size, medians farther from each other than from the laterals; abdomen oval; anterior spinnerets well separated; posterior spinnerets longer than anterior spinnerets with short apical segment; epigynum with large posterior atrium leading anteriorly on each side through the atriobursal orifice into a well-developed bulb-shaped bursa; palpus of the male with the tibia armed on the outer side in the lower half with a short stout protuberance or apophysis and from the distal margin with a long, flat, keeled apophysis which extends over the cymbium; the embolus is long and coiled with a well-developed hooked conductor present.

The European genotype *Cicurina cicurea* (Fabricius) is very closely related to the American species, *Cicurina brevis* Emerton. The principal difference in the two species is in the size of the body, *Cicurina cicurea* being considerably the larger, and in the height of the clypeus which is greater in the genotype than in *Cicurina brevis*. The external reproductive organs agree very closely in the two species. Most of the other American species differ somewhat from the genotype in the structure of the epigynum; the bursa of these is not developed as a separate organ, but merges imperceptibly into a canal connecting the bursa and the receptaculum. In several American species, the armature of the anterior tibiae differs considerably also, the spines being long and more overlapping, and sometimes more numerous. This is especially true of the new species included in this paper, *Cicurina bryantae*.

STRUCTURE OF PALPUS AND EPIGYNUM

The separation of the species of *Cicurina* must be based principally on the morphology of the secondary reproductive organs, the male palpus, and the epigynum of the female. The structure of the male palpus is relatively simple, and the variations between species easily characterized. The patella of the palpus is without apophyses. The tibia bears two apophyses, a small, basal protuberance which is well chitinized and usually bluntly pointed in the middle, and the distal or principal apophysis which differs with the species, but is always a large, conspicuous chitinized plate. It is usually curled or grooved on one edge and grows out over the cymbium in all the American species except *C. pallida* Keyserling. The embolus is long and coiled and rests on a conductor which varies in size and shape. In two of our species, *C. simplex* Simon and *C. intermedia* Chamberlin and Ivie, there is a small, flat, square projection posterior to the principal apophysis. In several other species, including the genotype, a small outgrowth is present here, but it is not conspicuous.

To separate species of *Cicurina* it is necessary to understand the structure of the epigynum; although males are easily classified, many species are known only by their female representatives, and even in the species where both sexes are known, the female specimens are far more numerous in collections. The epigynum of the female is almost entirely underneath the layer of external chitin, so that it is hard to differentiate between closely allied species where the structures are similar and not easily studied, unless material is available to dissect out the structure from a sodium or potassium hydroxide preparation.

The internal organs of the epigynum are always connected to the external surface by an opening, the atrium, which is situated posteriorly near the epigastric furrow. It leads anteriorly on each side into a bursa (Petrunkevitch, 1925), a tubelike structure which is seldom as heavily chitinized as the other structures of the epigynum. The bursae usually extend from the atrium to the anterior margin of the epigynum. Each joins imperceptibly a more narrow, more heavily chitinized tube which is often twisted or convoluted in its course to the receptaculum seminis. This tube which varies greatly in different species is called after Petrunkevitch (1925) the "connecting canal" between the bursa and the receptaculum. The receptaculum may be a single sac- or bulblike organ as in the majority of the *Cicurina* species or it may be a double bulb or sac connected by a narrow neck as in *Cicurina robusta* Simon (see Fig. 21*a*). The receptaculum is nearly always heavily chitinized and often is one of the most conspicuous structures which shows through the external layer. It is emptied by a narrow simple duct, the "fertilization canal" which leads into the uterus.

The epigynum of *Cicurina pallida* Keyserling is comparatively simple. Although the subchitinous parts of the epigynum have not been dissected out during this study, their structure appears fairly certain through the chitin. The atrium is undeveloped to the extent that the central part is neither hollowed nor chitinized (see Fig. 12). The subchitinous structures appear to consist only of a pair of receptacula with short ducts leading into them. Undoubtedly the receptacula are drained by fertilization canals as in the other species.

Material has not been available to study the morphology of the epigyna of *C. atomaria* Simon, *C. placida* Banks, and several other species which are undoubtedly more complicated than *C. pallida*, but not so highly specialized as *C. brevis* Emerton, *C. tersa* Simon, or *C. pusilla* Simon.

In *Cicurina brevis* Emerton, which from its external form closely

conforms to the genotype, the large posterior atrium opens along its entire anterior margin through the atriobursal orifices into the bursae (see Fig. 13*d*). The bulb-shaped bursae are the largest organs of the epigynum and extend to the anterior margin. The opening between the bursa and the connecting canal, although not very clearly seen, opens on the ventral side of the bursa. The connecting canal extends posteriorly, becoming very heavily chitinized and forming three loops on the postero-lateral side of the bursa. It empties into the receptaculum, which is situated dorsal to the bursa on its posterior margin. The receptaculum is unusually large and bean-shaped, with the long axis corresponding to the long axis of the spider. Its wall is formed of a very thick layer of chitin so that the interior is not much larger than the receptaculum of other species; it is drained by a fertilization duct of the usual type extending from its posterior margin.

The epigynum in *Cicurina tersa* Simon and *C. pusilla* Simon is very similar in construction, differing principally in the length of the connecting canal between the simple bursa and the receptaculum; the connecting canal empties into the receptaculum at its base near the exit of the fertilization canal. The receptacula in both these species are a pair of small saclike organs situated on each side of the atrium underneath the external chitin (Figs. 15 and 17*b*). From a ventral view of the spider, however, they are almost invisible, because they are not well impregnated with chitin. The atrium is quite large and well developed.

In *Cicurina simplex* Simon and *Cicurina idahoana* Chamberlin (see Fig. 20*a*), the connecting canals are more tortuous, and empty into the bulblike receptacula which are nearly always conspicuous from the outside, due to their heavy chitinous wall. The connecting canals in these cases empty directly into the anterior part of the receptacula which are drained from the posterior margin by the fertilization ducts.

The most complicated form of epigynum is undoubtedly found in the closely related group, *Cicurina schultzi*, n. sp., *Cicurina gertschi*, n. sp., *Cicurina davisi*, n. sp., *Cicurina intermedia* Chamberlin and Ivie, *Cicurina cavealis* Crosby and Bishop, and *Cicurina robusta* Simon. In the last-mentioned species the atrium is small and the bursa which leads out of it is more heavily chitinized than this part in most other species. A peculiar enlargement of the connecting canals is characteristic of this type of epigynum in the anterior part where the connecting canal makes its first bend. The connecting canal makes several wide loops on each side and finally empties into the more anterior of the pair

of receptacula, which are connected by a narrow tube. The fertilization duct drains the anterior bulb of the receptaculum from a point very near the entrance of the connecting canal (see Fig. 21*a*).

KEY TO SPECIES OF *Cicurina*

1.—Epigynum of female with atrium undeveloped, divided into two parts: principal apophysis of tibia of male palpus extending only slightly beyond tibia. *pallida* Keyserling.

Epigynum of female with a single atrium; principal apophysis of the tibia of male palpus extending far beyond tibia.....2.

2.—Tibia I usually armed with 2–2 ventral spines and 3 single lateral spines on inner face, if there are 2–3 ventral spines, none is distal; spiders rarely over 5 mm. in length; chelicerae seldom geniculate.....3.

Tibia I usually armed with 3–3 or 3–2 ventral spines, usually with at least one distal spine, 2, 3, or more lateral spines; spiders usually over 5 mm. in length; chelicerae geniculate.....9.

3.—Anterior median eyes only one-fourth as large as anterior lateral eyes.....4.

Anterior median eyes no less than half as large as anterior lateral eyes.....5.

4.—Receptacula of epigynum lying medial to the connecting canals. *atomaria* Simon.

Receptacula of epigynum lying under or lateral to connecting canals. *schultzi*, n. sp.

5.—Epigynum with bursa and connecting canals forming a pair of parallel, longitudinal bands; male with principal apophysis thin and extending only half the length of the cymbium.....6.

Epigynum with bursa and connecting canals forming a pair of arcs that almost meet anteriorly; principal apophysis of male strong and extending beyond the middle of the cymbium.....8.

6.—Atrium of epigynum large and well rounded; males as above; anterior median eyes usually no larger than other eyes.....7.

Atrium of epigynum a transverse slitlike opening; no males reported; anterior median eyes larger than other eyes.....*placida* Banks.

7.—Anterior median eyes much smaller than other eyes. *breviaria* Bishop and Crosby.

Anterior median eyes very slightly or no smaller than other eyes. *brevis* Emerton.

8.—Bands formed by connecting canals and bursa not extending posteriorly to epigastric furrow. No males recorded.....*tersa* Simon.

Bands formed by connecting canals and bursa extending posteriorly almost to the epigastric furrow. Males as in 4, part 2.....*pusilla* Simon.

9.—Posterior eyes in a straight or recurved row.....10.

Posterior eyes procurved.....14.

10.—Four or five lateral spines on inner face of tibia I, spines long and posterior spines greatly overlapping (Figs. 6, 6*a*).....*bryantae*, n. sp.

Two or three lateral spines on inner face of tibia I.....11.

11.—Receptaculum single on each side of epigynum, posterior in position.....12.

Receptaculum double on each side of epigynum, although anterior sphere of it is at times difficult to see.....13.

12.—Connecting canals of the epigynum showing through the chitin on each side as a horseshoe-shaped coil with the opening lateral; principal apophysis of male tibia without a chitinous projection preceding it..*idahoana* Chamberlin.

Connecting canals of epigynum showing through chitin as a coiled S-shaped tube on each side; principal apophysis of male tibia with a flat square projection preceding it.....*simplex* Simon.

13.—Connecting canals not passing between the two spheres of the receptaculum on each side of the epigynum.....*gertschi*, n. sp.

Connecting canals passing completely between the two spheres of the receptaculum on each side of the epigynum.....*davisi*, n. sp.

14.—Epigynum much wider than long, connecting canals of the two sides widely separated; principal apophysis of male palpus with flat square projection preceding it.....*intermedia* Chamberlin and Ivie.

Epigynum almost square; connecting canals of two sides almost contiguous..15.

15.—Connecting canals of female with the lateral loops horizontal, not extending anteriorly. No males described.....*cavealis* Bishop and Crosby.

Connecting canals of female with the lateral loops definitely bending anteriorly; principal apophysis of male palpus with no projection preceding it.

robusta Simon.

Cicurina pallida Keyserling

Figure 12

Cicurina pallida KEYSERLING, 1887, Verh. Zool.-Bot. Ges., Wien, XXXVII, p. 462, Pl. VI, fig. 26.—EMERTON, 1909, Trans. Connecticut Acad. Arts and Sciences, XIV, p. 221, Pl. VIII, fig. 7.

FEMALE.—Cephalothorax, legs, mouth parts, and sternum almost uniform yellow-brown. Ventral surface of tibia I with 2–2 spines and 3 single spines on the median lateral surface; anterior eyes slightly procurved and well separated; posterior eyes recurved and almost equidistant; abdomen pale, mottled gray on grayish white; background without any definite pattern; epigynum with the receptacula showing through chitin as a pair of prominent sacs, and the atrium as two incompletely separated openings.

Measurements.—Length, 5.60 mm.; length of cephalothorax, 2.80 mm.; length of abdomen, 2.90 mm.; width of clypeus, 0.16 mm.; diameter of anterior lateral eyes, 0.12 mm.; length of tibia and patella I, 2.50 mm.; length of tibia and patella IV, 2.80 mm.

MALE.—Shape and coloring as in female; armature same except that there is often a single small spine on the median distal side of tibia I; palpus typical, with short basal apophysis on tibia, and longer distal apophysis, this latter apophysis broad and laminate, almost blunt at

tip and not so long as the tibia; conductor of embolus a slender, deeply curved hook.

Measurements.—Length, 4.70 mm.; length of cephalothorax, 2.40 mm.; length of abdomen, 2.30 mm.; width of clypeus, 0.14 mm.; diameter of anterior lateral eyes, 0.10 mm.; length of patella and tibia I, 2.20 mm.; length of patella and tibia IV, 2.60 mm.

TYPE LOCALITY.—Washington (D. C.). Type, male, Marx Collection in the National Museum.

DISTRIBUTION.—Indiana (cited by Petrunkevitch, 1911).—Massachusetts: Sharon and Northfield (Emerton, 1909).—Michigan: Ann Arbor, April 4, 1930, ♀ (E. L. Miner).—New Jersey: Alpine, April 25, 1909, ♀ (G. von Krockow).—New York: (cited by Petrunkevitch, 1911); Palisades on Hudson, Essex Co., ♂, ♀, May 31, 1908 (von Krockow), A. M. N. H.; Sea Cliff, Long Island, 3 ♀, 1 ♂ (Nathan Banks coll.), M. C. Z.—Pennsylvania: Bloomsburg, ♂, A. M. N. H.

Cicurina brevis (Emerton)

Figures 3, 5, 13*a–d*

Tegenaria brevis EMERTON, 1889, Trans. Connecticut Acad. Arts and Sciences, VIII, p. 30, Pl. VIII, fig. 5.

Cicurina brevis PETRUNKEVITCH, 1911, Bull. American Mus. Nat. Hist., XXIX, p. 530.

FEMALE.—Cephalothorax, legs, sternum, and mouth parts pale golden yellow, with considerable variation in intensity of color; legs, sternum, and mouth parts well clothed with hairs; venter of tibia I with 2–2 spines and 3 on the medial face; anterior eyes contiguous; anterior median eyes usually as large as the anterior lateral eyes, sometimes even larger; posterior eyes in straight line with median eyes farther from each other than from lateral eyes; abdomen of variable color; grayish white with few if any markings to light gray with definite dark gray markings; markings when present consist chiefly of median anterior stripe connecting with a row of paired median spots, very few lateral markings; epigynum conspicuous with a pair of heavy lateral bars outlining the sides, the bar effect given by the bursa and connecting canals which show through the epidermis; posteriorly there is a large atrium.

Measurements.—Length, 3.50 mm.; length of cephalothorax, 1.80 mm.; length of abdomen, 1.90 mm.; width of clypeus, 0.12 mm.; diameter of anterior lateral eyes, 0.10 mm.; patella and tibia I, 1.50 mm.; patella and tibia IV, 1.70 mm.

MALE.—Very pale; cephalothorax, legs, mouth parts, and sternum almost transparent white; cephalic part very blunt; spination, relations of eyes, and abdominal markings as in female; palpus rather small; first apophysis of tibia small; principal apophysis thin and narrow but curled on its dorsal side, extending a little over half way over the cymbium; conductor of the style exceedingly long, heavy, and hooked.

Measurements.—Length, 3.30 mm.; length of cephalothorax, 1.80 mm.; length of abdomen, 1.60 mm.; width of clypeus, 0.13 mm.; patella and tibia IV, 1.70 mm.

TYPE LOCALITY.—Mt. Washington, New Hampshire. Type specimen M. C. Z.

DISTRIBUTION.—Connecticut: New Haven (cited by Emerton, 1889).—Indiana: (Petrunkevitch, 1911).—Minnesota: Minneapolis, June 1, 1932, 2 ♀ (Gertsch); Itasca Park, 2 ♀, May 29–30, 1932 (Gertsch, A. M. N. H.).—New York: Cayuga Lake basin (Banks, 1892), M. C. Z.; Onondaga Co., Oct. 3, 1900, Britcher, deter. Gertsch, A. M. N. H.; Black Bear Mt., Sept. 27, 1916 (Miner), A. M. N. H.; near Sloatsburg, Sept. 22, 1934 (Gertsch) ♂♂, ♀♀, A. M. N. H.—North Carolina: Mt. Mitchell, Sept. 5, 1930, 1 ♀, P. J. Darlington, M. C. Z.—Ohio: Salineville (Nathan Banks coll.) 3 ♀, 3 ♂, M. C. Z.—Virginia: Falls Church, ♀♀, M. C. Z.

Cicurina breviaria Bishop and Crosby

Cicurina breviaria BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., XLI, Nos. 3 and 4, pp. 196–198, Figs. 44, 45.

MALE.[1]—Cephalothorax yellow tinged with gray, very broad and convex with sides rounded; anterior eyes slightly procurved, close together, anterior median eyes much smaller than laterals; posterior eyes in very slightly procurved line, medians a little smaller than laterals, farther from each other than from laterals; abdomen grayish white with short median basal mark, with five pairs of small spots posteriorly; sides marked with diagonal rows of spots; venter light; tibia of palpus armed on outer, lower, distal angle with a rounded process larger and longer than that of *C. brevis;* principal apophysis broad and flat, deeply emarginate at end with tips rounded; embolus shorter than that of *C. brevis*, and conductor (acc. to figure) more hooked.

Measurements.—Length, 4.00 mm.

TYPE LOCALITY.—North Carolina: Grandfather Mt. (known only from holotype, male (coll. of Bishop and Crosby)).

[1] Description adapted from original description as no specimens available for study.

Cicurina placida Banks

Figures 1, 9, and 11

Cicurina placida BANKS, 1892, Proc. Acad. Phila., p. 27, Pl. 1, fig. 77.

FEMALE.[1]—Very similar in color and markings to *Cicurina brevis* Emerton; cephalothorax reddish yellow-brown; tibia I clothed with 2–3 ventral spines on inner face; anterior eye row slightly recurved, clypeus only slightly wider than anterior lateral eyes; anterior median eyes larger than other eyes, and slightly farther from each other than from anterior lateral eyes; posterior eyes in slightly procurved row, about equally spaced; reproductive plate with posterior atrium a wide transverse slitlike opening; the bursa and connecting canals seen indistinctly beneath the chitin as two almost parallel thickenings with a darkened longitudinal fold distinct in the center of each, and the posterior part near the atrium enlarged.

Measurements.—Length, 5 mm.

TYPE LOCALITY.—Upper Cayuga Lake Basin, New York (type specimens, Banks coll.), M. C. Z.

Cicurina tersa Simon

Figures 15 and 15*a*

Cicurina tersa SIMON, 1886, CR. Soc. Entom. Belgique, XXX, pp. 56–60.—BANKS, 1913, Acad. of Nat. Sci. of Phila., p. 18, Figs. 45, 48.

FEMALE.—Cephalothorax light brownish yellow and almost glabrous except for hairs in eye region and bristles down median line; proximal segments of legs same color, distal segments and mouth parts darker brown; sternum yellowish background mottled with gray especially around sides, and thickly clothed with hair; legs hairy; venter of tibiae I with 2–2 spines, distal third pair being replaced by bristles or hairs; anterior row of eyes procurved and almost contiguous, medians smaller than laterals; posterior row in a straight line (viewed from directly above); abdomen light gray, thickly clothed with dark hairs and with many well-defined dark gray markings which include the basal anterior area, and a median anterior mark which extends to the first third; the posterior two-thirds are marked with a series of dark arches; the sides are marked with dark gray splashes; the epigynum has a large median atrium posteriorly, and lateral to this the posterior ends of the connecting canals show through the epidermis and extend anteriorly on each side; the bursa open from the anterior lateral angle of the atrium and extend

[1] Type specimen not seen during this study. Description and drawings furnished by Miss Elizabeth B. Bryant of the Harvard Museum of Comparative Zoölogy

anteriorly, joining the connecting canal which swings laterally then curves directly forward, bends back posteriorly and straightens to open into the receptaculum, which lies immediately anterior to the atrium, one on each side.

Measurements.—Length, 4.80 mm.; length of cephalothorax, 2.10 mm.; length of abdomen, 2.80 mm.; width of clypeus, 0.11 mm.; diameter of anterior lateral eyes, 0.11 mm.; tibia and patella I, 2.00 mm.; tibia and patella IV, 2.10 mm.

TYPE LOCALITY.—Washington-territory. Type specimen presumably in Museum National d'Histoire Naturelle.

DISTRIBUTION.—British Columbia: Campbell R., Dec., 1918, ♀, A. M. N. H.—Washington: Seattle, March 15, 1934, Exline, ♀; Kincaid, ♀; March 14, 1932, Exline, ♀; July 24, 1931, Clarke, ♀; March, 1932, Iorns, ♀; Kincaid, ♀ ♀; North Bend, April 25, 1896, Kincaid, ♀ ♀; Stillaguamish R., March 20, 1932, Iorns, ♀; Olympia, Sept., 1931, Exline, ♀; White Horse Mt., May 15, 1932, Exline, ♀.

Cicurina pusilla (Simon)

Figures 8, 17, 17*a–b*

Cybaeus pusillus SIMON, 1886, CR. Soc. Entom. Belgique, XXX, pp. 56–60.
Cicurina pusilla BANKS, 1913, Acad. of Nat. Sci. of Phila., p. 180, Figs. 34, 40.

FEMALE.—Cephalothorax light yellow-brown, shiny and almost glabrous; sternum and proximal segments of the legs same color, but mouth parts well clothed with fine hairs; anterior tibiae with 2–2 spines and 3 spines on the median face, with the distal third pair of spines found in many of the other species often replaced by bristles or hairs; anterior row of eyes procurved, about equal in size, posterior eyes slightly recurved, almost equally distant, with posterior median eyes smallest; abdomen light gray, clothed with dark hairs, and with dark gray markings of which there are nearly always an anterior median longitudinal bar and a posterior series of curved transverse bands darkening posterior part; epigynum conspicuous, almost round, thickly clothed with hairs, with two dark curved bars representing the chitinous connecting canals outlining it, and with a large, although sometimes inconspicuous artrium in the posterior median region; the entire center of the epigynum light in color; the connecting canals extend from the epigastric furrow, where those of the two sides are separated by at least twice their diameter, curve around the epigynum to almost meet in the anterior medial region.

Measurements.—Length, 4.90 mm.; length of cephalothorax, 1.90 mm.; length of abdomen, 3.00 mm.; tibia and patella I, 1.60 mm.; tibia and patella IV, 2.00 mm.; width of clypeus, 0.10 mm.; diameter of anterior lateral eyes, 0.10 mm.

MALE.—Color and spination essentially as in female; palpus large, bearing a very long coiled embolus, the tip of which rests on a long hooked conductor; the tibia bears a short blunt apophysis proximally, and distally a very long flat apophysis, the lateral sides of which are both curled especially the dorsal side; this second apophysis extends two-thirds of the length of the cymbium.

Measurements.—Length, 4.60 mm.; length of cephalothorax, 2.10 mm.; length of abdomen, 2.50 mm.; width of clypeus, 0.12 mm.; diameter of anterior median eyes, 0.12 mm.; tibia and patella I, 2.10 mm.; tibia and patella IV, 2.20 mm.

TYPE LOCALITY.—Washington-territory (Simon). Type specimens probably in Museum National d'Histoire Naturelle.

DISTRIBUTION.—Oregon: Tillamook Co., Aug., 1931 (R. W. Macy), ♂, ♀.—Washington: Olympia, Sept. 12, 1931, Exline, ♂, ♀; Dec. 27, 1931, ♀; Seattle, April 6, 1931, Exline, ♀ ♀; April 26, 1933, Hatch, ♀; May 18, 1934, Exline, ♀ ♀; Oct. 3, 1930, Exline, ♀; Feb. 20, 1932, Exline, ♂; Kincaid, ♀ ♀; April 10, 1933, Hatch, ♀; March, 1932, Exline, ♀; April 13, 1932, Schwartz, ♀ ♀; May 15, 1932, Kincaid, ♀ ♀; Labar, Olympic Mts., Aug. 14, 1933, Exline, 3 ♀.

Cicurina nevadensis Simon

Cicurina nevadensis SIMON, 1886, CR. Soc. Entom. Belgique, XXX, pp. 56–60.

FEMALE.[1]—Cephalothorax dark red-brown, marked posteriorly with dark radiating lines; legs reddish yellow, darker distally, short and stout; 2–2 ventral spines with 3 lateral spines on anterior tibiae; posterior eyes in straight row; medians much smaller than laterals, quite widely separated and equally spaced; anterior eyes large, nearly equal, in a slightly procurved row; abdomen blackish gray, marked in the posterior half with transverse black arches; epigynum dark brown, semicircular, with a large posterior atrium twice as wide as long.

Measurements.—Length, 6.00 mm.

TYPE LOCALITY.—Nevada (Simon). Type specimen presumably in Museum National d'Histoire Naturelle.

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[1] Description adapted from translation of original description.

Cicurina atomaria Simon

Figure 18

Cicurina atomaria Simon, 1898, Ann. Soc. Entom. Belgique, XLII, p. 8.

Female.—Cephalothorax brownish orange-yellow, smooth and hairless; chelicerae slightly darker and geniculate at base; legs and sternum slightly darker and brownish yellow, well clothed with hairs; anterior tibiae with 2–2 ventral spines and three single spines on medial side; anterior eyes in a straight row, with anterior median eyes almost touching anterior lateral eyes, but anterior median eyes well separated; anterior median eyes less than one-fourth as large as the anterior lateral eyes; abdomen gray with paired grayish white spots, which unite in the posterior region forming bars; epigynum with posterior transverse atrium, laterally a black coiled connecting canal outlining each side of the epigynum while medial to it lies the receptaculum of each side.

Measurements.—Length, 4.80 mm.; length of cephalothorax, 2.20 mm.; length of abdomen, 2.60 mm.; length of tibia and patella I, 1.70 mm.; length of tibia and patella IV, 1.90 mm.; clypeus, 0.17 mm.; diameter of anterior lateral eyes, 0.10 mm.

Type Locality.—Louisiana (Simon). Type specimen presumably in the Museum National d'Histoire Naturelle.

Distribution.—North Carolina: Mt. Leconte, Sept. 6, 1928 (W. M. Barrows).

Cicurina bryantae, new species

Figures 4 and 14

Female.—Pale; cephalothorax light yellow with a few hairs in cephalic region; cephalic region well separated from thoracic region by cephalic groove; thorax slender; legs long, pale, and same color as cephalothorax, fairly stout, clothed with fine hair, and tibiae and metatarsi rather heavily spined; tibiae I with a variable number of spines (not same on two legs), 3–3 or 3–2 ventral spines without counting small distal pair, 3 to 4 lateral spines on inner face (see Fig. 6), spines long and overlapping; anterior row of eyes almost straight; clypeus not much wider than anterior lateral eyes; anterior median eyes only half as large as anterior lateral eyes, and farther from each other than from lateral eyes; posterior eyes recurved (in a dorsal view), medians a little smaller than laterals, and all about equidistant; chelicerae robust, slightly geniculate, each with a stout spine on the rounded inner face, spines of two chelicerae crossing in front; lower furrow of chelicerae with four stout teeth followed by several very small ones set close together; abdomen small, very pale grayish white, well covered with fine gray hairs; external reproductive plate pale yellow, almost square with a large atrium in the posterior part slightly separated by a partial anterior septum; the anterior bursa is somewhat distinguishable through the chitin, and laterally the dark connecting canals between the bursa and receptaculum seminis are clearly visible.

Measurements.—Length, 4.10 mm.; length of cephalothorax, 2.50 mm.; length of abdomen, 1.60 mm.; length of tibia and patella I, 2.00 mm.; length of patella and tibia IV, 2.10 mm.; clypeus, 0.10 mm.; diameter of anterior lateral eyes, 0.08 mm.

TYPE LOCALITY.—Newfound Gap, near Cherokee, North Carolina, Aug. 3, 1930. Type specimens (N. Banks coll.), M. C. Z.

Cicurina idahoana Chamberlin

Figures 10, 20, 20*a*

Cicurina idahoana CHAMBERLIN, 1919, Annals Ent. Soc. of Amer., XII, p. 258, Pl. XIX, fig. 10.

FEMALE.—Cephalothorax, legs, sternum, and mouth parts light yellow-brown with tibiae, metatarsi, and tarsi of legs a darker brown (eye region and chelicerae also darker brown in some specimens); chelicerae somewhat geniculate at base; clypeus slightly wider than the diameter of the anterior lateral eyes; anterior lateral eyes and posterior lateral eyes contiguous and all a little larger than the anterior median eyes; spines on venter of tibia I, 3–2 or 3–3, with 3 lateral spines on median side; epigynum of variable brown color, broader than long with a small oval atrium situated posteriorly near the epigastric furrow, and with a pair of large connecting canals visible through the chitin forming a pair of horseshoe-shaped coils anteriorly; posterior to the canals and lateral to the atrium a pair of widely separated receptacula are indistinctly seen.

Measurements.—Length, 5.40 mm. to 7.00 mm.; length of cephalothorax, 2.30 mm.; length of tibia and patella I, 1.90 mm.; width of clypeus, 0.11 mm.; diameter of anterior lateral eyes, 0.10 mm.; length of tibia and patella IV, 2.20 mm.

MALE.—Color, shape, and spination essentially as in female; palpus large, tibia of pedipalp bearing a proximal triangular chitinous apophysis, and distally a broad flat apophysis which is slightly curled on the edges; no projection proximal to second apophysis; conductor of embolus with very short projection.

Measurements.—Length, 5.00–5.80 mm.; average length of cephalothorax, 2.40 mm.; length of tibia and patella I, 2.30 mm.; length of tibia and patella IV, 2.70 mm.; width of clypeus, 0.13 mm.; diameter of anterior lateral eyes, 0.10 mm.

TYPE LOCALITY.—Moscow Mts., Idaho. Type specimens (coll. of R. V. Chamberlin).

DISTRIBUTION.—British Columbia: (no specific data), A. M. N. H.—Washington: Olympia, March 24, 1932, Exline; Dec. 22, 1932, H. E.;

1933, Yates; Sept. 20, 1931, H. E.; Dec. 1, 1933, H. E.; Dec., 1929, Exline; March 26, 1931, Exline; Seattle, Kincaid, July, 1932, Exline.

Cicurina simplex Simon

Figures 19, 19*a–c*

Cicurina simplex Simon, 1886, CR. Soc. Entom. Belgique, XXX, pp. 56–60.—Banks, 1913, Proc. Acad. of Nat. Sci. of Phila., Figs. 35 and 38.

Female.—Cephalothorax, legs, and mouth parts almost uniform light yellow-brown with tibiae and metatarsi of legs a little darker; width of clypeus very slightly greater than diameter of the anterior lateral eyes; eyes subequal in size; anterior median eyes dark and smaller than anterior lateral eyes, not so far from anterior lateral eyes as from each other; posterior eyes slightly recurved in dorsal view, and about equally distant from each other; tibia I with 3–3 ventral spines and 3 lateral spines on medial side; abdomen and venter grayish white thickly clothed with fairly long gray hairs; epigynum dark brown, almost square, but narrow anteriorly, with a small atrium broader than long near the epigastric furrow; a pair of receptacula widely separated in the posterior half, indistinctly visible through the chitinous exoskeleton, as well as the connecting canal on each side which extends from it anteriorly, curves back posteriorly and swings anteriorly to become lost from sight in another posterior curvature.

Measurements.—Length, 5.60 mm.; length of cephalothorax, 2.30 mm.; length of tibia and patella I, 2.60 mm.; distance from anterior lateral eyes to margin of clypeus, 0.11 mm.; longest diameter of anterior lateral eyes 0.10 mm.

Male.—Size and color as in female; spines of anterior tibiae the same; eyes as above, but clypeus is slightly higher in comparison to the diameter of the anterior lateral eyes; palpus large, tibia bearing a small triangular chitinous apophysis on the proximal lateral side, and a very long flat, very broad, somewhat curled apophysis distally; proximal to the base of this second apophysis on the ventral margin is a small chitinous projection which does not appear in other species except in *C. intermedia* Chamberlin and Ivie; the conductor of the long coiled embolus bears a short curved projection.

Type Locality.—Washington-territory (Simon). Type specimen probably in Museum National d'Histoire Naturelle.

Distribution.—Montana: Hamilton, Ravalli Co., March 23, 1934, ♀, A. M. N. H.; Moose Lake, Ravalli Co., March 25, 1934, ♀, W. L. Jellison, A. M. N. H.—Washington: Seattle, Kincaid; July, 1932,

Exline; Olympia (Yates), Sept. 17, 1931; May, 1932, Exline; Oct. 19, 1931, H. E.

Cicurina ludoviciana Simon

Cicurina ludoviciana Simon, 1898, Ann. Soc. Entom. Belgique, XLII, p. 8.

Female.[1]—Cephalothorax yellow-brown, smooth and subglabrous; chelicerae strongly geniculate; legs long and heavily spined, yellow brown; sternum reddish yellow; anterior eyes procurved, anterior median eyes smaller than anterior lateral eyes; posterior eyes equidistant; posterior median eyes a little smaller than posterior laterals; abdomen yellowish brown, sparingly hairy; epigynum yellowish red, semicircular, heavily clothed with hair, with a half moon-shaped region glabrous and shiny.

Measurements.—Length, 9.00 mm.

Type Locality.—Louisiana (Simon). Type specimen presumably in Museum National d'Histoire Naturelle.

Cicurina schultzi, new species

Figure 23

Female.—Cephalothorax flat, gently curved sides, orange-yellow, glabrous and shiny except for a few scattered hairs. Chelicerae same color, quite hairy, a little geniculate at the base; lower furrow of fang with three teeth and several denticles toward the inner side. Mouth parts orange-yellow; sternum pale yellow, fitted quite close to coxae and extending posteriorly between hind coxae. Legs pale yellow, becoming more orange on distal segments, covered with long black hairs; spines on venter of tibiae I 2–2; on inner lateral side of one tibia type specimen bears two moderate spines and two small spines, other tibia bears only one moderate spine. Posterior eyes in a straight row, evenly spaced, and almost equal in size although laterals are slightly larger than the medians. Anterior eyes equally spaced, laterals considerably larger than the medians. The clypeus is not quite so high as the diameter of the anterior lateral eyes. (By these characters, this species would seem to belong to *Cryphoeca* rather than to *Cicurina*. The structure of the epigynum, however, is certainly of the *Cicurina* type, and places the species between the *Cicurina robusta* group and the *Cicurina simplex* group.) The abdomen is grayish white and is clothed both dorsally and ventrally with very long black hairs.

The epigynum is formed with a conspicuous, large posterior atrium, from the anterior lateral margins of which the ductlike bursae lead anteriorly, each then folds back posteriorly and curves completely around the posterior ball of the receptaculum and probably curves back to empty into it. There are two separate parts of the receptaculum divided into an anterior and posterior ball on each side. The tubes are quite clearly visible for most of their length under the external chitin.

Measurements.—Length, 4.00 mm.; tibia and patella I, 1.60 mm.; tibia and

[1] Description adapted from translation of original description

patella IV, 1.80 mm.; height of clypeus, 0.06 mm.; diameter of interior lateral eyes, 0.10 mm.

HOLOTYPE.—Female, collected at McDowell Lake, Upper Anaconda Creek, Glacier National Park, Montana, Aug. 26, 1934, by L. P. Schultz, in the collection of The American Museum of Natural History.

Cicurina schultzi, new species, differs from *Cicurina simplex* in having the divided receptaculum of the epigynum, in which respect it is similar to the *C. robusta* group. It is smaller than any species of the latter group, however, and has the simpler connecting canals; the clypeus is lower and the median eyes are smaller than any other species in the genus except *C. atomaria* Simon.

Cicurina gertschi, new species

Figure 22

FEMALE.—Cephalothorax pale yellow with faint brownish radiating impressions, and lightly infused with a deeper color toward the anterior lateral margins; cephalothorax gently rounded on the sides to the cephalic groove, anterior to which the lateral margins are straight and parallel with the head truncate across the front; cephalothorax shiny and glabrous except for a few hairs along the median line and scattered hairs elsewhere. Chelicerae a little darker than the cephalothorax, very geniculate, and protruding in basal third, with prominent lateral condyles; the furrow of the cheliceral fang is armed on its posterior margin with two teeth, the external one of which is especially large and has two points; on its ventral margin the furrow is armed with four teeth, the internal three of which are contiguous at their bases; the fang is well developed. The sternum is yellow with darker margins, almost round, clothed with many long hairs. The labium and endites and distal segments of the pedipalps are more orange in color, all well clothed with hair; the labium is only half as long as the endites; the tip of the pedipalp is armed with a strong claw. The legs are only moderately long, the basal segments yellow, the distal segments darkening into an orange brown; legs hairy; tibia I armed with 2 pairs of ventral spines and three weak spines laterally. Posterior eyes in a straight row, medians slightly smaller than laterals, and a little farther from each other than from lateral eyes. Anterior eyes (from front) procurved, medians a little smaller than laterals, and closer to each other than to lateral eyes; clypeus only slightly higher than the diameter of the anterior lateral eyes. Abdomen grayish white, irregularly spotted in the anterior part with light gray and more definitely streaked with gray posteriorly, quite gray around spinnerets the basal segments of which are light yellow with the distal ones white.

The epigynum is composed of a large posterior atrium; from the lateral sides of the atrium the connecting canals extend directly to the anterior margin of the epigynum without any intervening part to designate as bursal; the connecting canal on each side swings laterally and makes a conspicuous bend either ventrally, dorsally, or medially, from which the canal extends posteriorly and curves to enter the receptaculum in its median anterior margin. The receptaculum is rather small, almost round, and situated on the most lateral part of the epigynum and in the posterior half; a second reservoir or part of the receptaculum is faintly seen anterior

and dorsal to the prominent one. The fertilization canal is probably typical, but cannot be seen in the type specimen, and no material is available for dissection.

Measurements.—Length, 5.20 mm.; tibia and patella I, 1.40 mm.; tibia and patella IV, 1.70 mm.; height of clypeus, 0.08 mm.; diameter of anterior lateral eyes, 0.08 mm.

HOLOTYPE.—Female from Larch Creek, Ravalli Co., Montana, collected April 8, 1934, by W. L. Jellison, in the collection of The American Museum of Natural History.

This species is most closely related to *Cicurina schultzi*, new species, and was collected in the same general locality; the connecting canals of the epigynum do not differ greatly. The relative size of the anterior eyes and width of the clypeus separate the two species.

Cicurina davisi, new species

Figure 24

FEMALE.—Cephalothorax smooth, without noticeable cephalic groove, almost glabrous, with gently rounded sides. Chelicerae somewhat geniculate at base, on the inner angle a large spine on each chelicera; lower furrow armed with 5 or 6 small teeth, the inner ones very small. Cephalothorax, chelicerae, pedipalps, and legs light yellow. Sternum yellowish white, a little darker on the margins, very blunt in front, with a narrow point behind, extending half the way between the coxae. The endites and labium orange-brownish yellow. Posterior eyes in a straight row, almost equal in size and almost equally spaced, the medians being slightly further apart than they are from the laterals. Anterior eyes in a procurved row (seen from the front); medians smaller than the laterals, separated from each other almost by a diameter, and not quite so far from the lateral eyes. Clypeus not quite so high as the diameter of the anterior lateral eyes. Anterior tibiae armed with 2–3 spines underneath. Abdomen whitish gray mottled with gray spots which are only slightly darker than the background color.

Epigynum of the *C. robusta* type with two pairs of large receptacular sacs resembling balls visible through the chitin. The posterior opening into the bursae is minute; from it the narrow tubelike bursa leads anteriorly on each side, curves around the anterior ball of the receptaculum, probably passes between the balls and swings around the posterior ball, continues in an anterior course, then encircles the two balls together, taking a transverse path between the two halves and probably empties into the posterior ball of the receptaculum.

Measurements.—Length, 5.00 mm.; tibia and patella I, 1.40 mm.; tibia and patella IV, 2.00 mm.; height of clypeus, 0.09 mm.; diameter of anterior lateral eyes, 0.10 mm.

HOLOTYPE.—Female, collected December, 1934, at Llano (Llano Co.), Texas, by L. Irby Davis (A. M. N. H.).

This species which belongs in the *robusta* group resembles *Cicurina cavealis* very closely; it is smaller than the latter, however, and is similar to *C. robusta* in having a very small posterior opening as contrasted to the medium-sized one of *C. cavealis;* the connecting tubes of

the epigynum are not so long and tortuous as in *C. robusta*, or *C. intermedia*.

Cicurina intermedia Chamberlin and Ivie

Cicurina intermedia CHAMBERLIN AND IVIE, 1933, Bull. of Univ. of Utah, XXIII, No. 4, p. 46, Pl. XI, figs. 116–118.

FEMALE.—Cephalothorax, sternum, and legs almost uniform yellow-orange-brown; chelicerae geniculate at base; tibiae I with 2–3 or 2–2 ventral spines (in specimens seen during this study; 3–3 in specimens of Chamberlin and Ivie), 3 lateral spines on medial face of tibia I; posterior eyes in procurved line; abdomen pale grayish white; epigynum with a short, wide posterior atrium, by which anteriorly the bursae and connecting canals are reached; connecting canals extend forward, make a lateral loop and empty into a receptaculum; receptacula divided into two sacs on each side which are probably united dorsally.

Measurements.—Clypeus, 0.10 mm.; anterior lateral eyes, 0.10 mm. (Note: Complete description, measurements, and figures given in the original description.)

MALE.—Similar to female, tibia of palpus with basal apophysis sharply pointed at tip; second apophysis short, extending but half the length of cymbium, broad at the base and narrowing to abrupt point; conductor of embolus a short slender hook.

TYPE LOCALITY.—Clear Creek, S. Fork of Raft River, Utah. Type specimens in collection of Chamberlin and Ivie.

DISTRIBUTION.—Utah: Salt Lake City, Aug., 1931 (Gertsch), A. M. N. H.; Fish Lake, Sevier Co., July 8, 1930 (Gertsch), A. M. N. H. —Oregon: Crater Lake, Sept. 12, 1932, Kincaid. Washington: Pullman (Nathan Banks coll.), M. C. Z.—Montana: Moose Lake, Ravalli Co., March 25, 1934, W. L. Jellison, A. M. N. H.—Minnesota: Itasca Park, May 30, 1932 (coll. Gertsch), A. M. N. H.—Note: These two female specimens from Minnesota are not typical of the species. They measure only 4.2 mm. in length, are very pale, and the connecting canals are not chitinized in the same proportions as in the more typical specimens. The atrium and connecting canals as well as the other general characters are too closely in agreement with this species, however, to consider them new without more available material.

Cicurina cavealis Bishop and Crosby

Cicurina cavealis BISHOP AND CROSBY, 1926, Jour. of the Elisha Mitchell Sci. Soc., XLI, Nos. 3 and 4, p. 197, Fig. 46.

FEMALE.[1]—Cephalothorax reddish brown, strongly convex, sides constricted toward front; anterior eyes slightly procurved, equidistant, medians smaller than laterals; posterior eyes slightly procurved, equidistant, medians slightly smaller than laterals; legs and palpi lighter than cephalothorax; abdomen yellowish gray marked with numerous dark patches with an indication of a chevron pattern on hinder half; venter dusky yellowish; epigynum resembling *C. robusta* Simon; atrium oval, posterior in position with connecting canals forming anterior and lateral loops; lateral loops, however, do not extend anteriorly as in *C. robusta*. Length, 7.00 mm.

TYPE LOCALITY.—Missouri, Rochport Cave, 3 specimens (coll. of Crosby and Bishop).

HOLOTYPE.—Female and 2 paratypes (coll. of Crosby and Bishop).

Cicurina robusta Simon

Figures 21 and 21*a*

Cicurina robusta SIMON, 1886, CR. Soc. Entom. Belgique, XXX, p. 40.—CHAMBERLIN AND IVIE, 1933, Bull. of Univ. of Utah, XXIII, No. 4, p. 46.

Cicurina arcuata KEYSERLING, 1887, Verh. Zool.-Bot. Ges. Wien., XXIX, p. 530.—PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., XXIX, p. 530.

Cicurina utahana CHAMBERLIN, 1913, Ann. Ent. Soc. Amer., XII, No. 3, p. 257, Pl. XIX, fig. 8.

FEMALE.—Cephalothorax, sternum, and proximal segments of legs pale yellow-brown; terminal segments of legs and mouth parts reddish brown; chelicerae geniculate at base; tibia I with 3–3 ventral spines and 3 lateral spines; eyes small and close together; anterior median eyes almost touching each other but further from the laterals which are larger; anterior and posterior lateral eyes almost contiguous; posterior eyes in a procurved row; abdomen, in pale specimens, almost uniform grayish white, thickly clothed with long fine hairs; in dark specimens, abdomen well marked with streaks and dashes of very dark gray, these forming in the mid-dorsal line a series of chevrons and almost solid dark color toward tip of abdomen, on the venter as well as the dorsal surface; epigynum variable in form depending on the transparency of the external chitin; a single median posterior atrium of small size leads anteriorly on each side into a bursa which joins the long and tortuous connecting canal; this makes conspicuous anterior and lateral loops and finally ends in the receptaculum which is divided into two sacs connected by a large canal; both sacs are often visible, though the posterior one is nearer the surface.

[1] Description taken from original description of Crosby and Bishop.

Measurements.—Length varies from 3.50 mm. to 7.60 mm.; length of a typical specimen, 7.10 mm.; length of cephalothorax, 3.20 mm.; length of abdomen, 4.00 mm.; width of clypeus, 0.12 mm.; diameter of anterior lateral eyes, 0.10 mm.; tibia and patella I, 2.10 mm.; tibia and patella IV, 2.60 mm.

Male.—Coloring, armature of the tibiae, and the relation of eyes as in female; palpus large; tibia with principal apophysis large which extends three-quarters of the length of the cymbium, very broad in its proximal half, abruptly narrowing distally; conductor of embolus a medium-sized hook.

Variations.—The number of spines on the ventral surface of tibia I in many specimens is reduced to 2–2, there being no distal spines, but these are replaced by long hairs or bristles; when the preceding is the case there are three instead of two lateral spines; the color of the abdomen varies greatly in both sexes; the visibility of the parts of the epigynum depends entirely on the relative impregnation of chitin of the internal structures and the exoskeleton.

Type Locality.—Colorado (Simon). Type specimen probably in Museum National d'Histoire Naturelle.

Distribution.—Colorado: Denver (W. G. Dietz); Pikes Peak Canyon, July 21, 1908 (F. E. Lutz); Lump Creek, near Gilpin, Aug. 1, 1934 (H. G. Rodeck), A. M. N. H.—Idaho: Montpelier, Aug. 19, 1930 (Gertsch), A. M. N. H.—Minnesota: Plummer, Nov. 12–18, 1933 (Denning), A. M. N. H.; Itasca Park, May 29–30, 1932 (Gertsch), A. M. N. H.—Missouri: Rocheport Cave (Nathan Banks coll.), M. C. Z.—Montana: West Fork, Ravalli Co., June 10, 1934, A. M. N. H.—New Jersey: Alpine, April 25, 1909; Roselle Park, XI–20–10, A. M. N. H.—New Mexico: (cited by Chamberlin, 1933).—New York: Cornwall, May 30, 1913; Palisades on Hudson River, April 20, 1907 (A. P.); Lake Sebago, Interstate Park, Oct. 17, 1933 (Gertsch); Apulia, Oct., 1900 (Britcher), A. M. N. H.; Sea Cliff (Nathan Banks coll.) 4, 2, M. C. Z.—Ohio: Salineville (Nathan Banks coll.), M. C. Z.—Tennessee: Cumberland Gap, March 24, 1929 (Barrows), A. M. N. H.; Montvale, March 18, 1929 (W. M. Barrows); Great Smoky Mts., July 8–10, 1933 (Gertsch and Ivie), A. M. N. H.—Utah: Chamberlin (cited in 1913); Fish Lake, Sevier Co., June 22, 1930 (Gertsch), A. M. N. H.; Mirror Lake, Uintah Mts., Sept. 3, 1931 (Gertsch), A. M. N. H. —Texas: Austin, A. M. N. H.—Virginia: Falls Church (Nathan Banks coll.), M. C. Z.—Canada (Manitoba): Aweme, Oct. 16, 1917 (Criddle), A. M. N. H.

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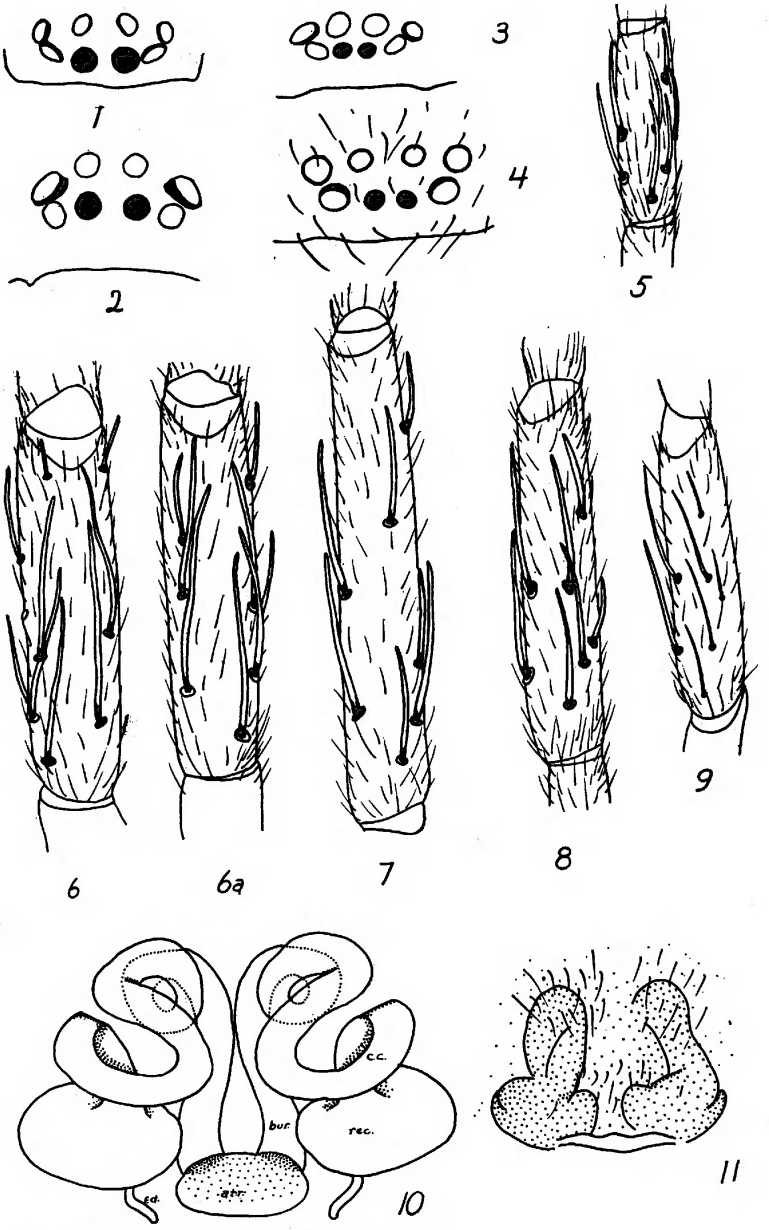

Fig. 1. *Cicurina placida* Banks, eyes.

Fig. 2. *Cicurina cicurea* Fabricius, eyes.

Fig. 3. *Cicurina brevis* Emerton, eyes.

Fig. 4. *Cicurina bryantae*, n. sp., eyes.

Fig. 5. *Cicurina brevis* Emerton, ventral view of tibia I.

Fig. 6, 6*a*. *Cicurina bryantae*, n. sp.; 6, ventral view of left tibia I; 6*a*, same for right tibia.

Fig. 7. *Cicurina cicurea* Fabricius, ventral view of tibia I.

Fig. 8. *Cicurina pusilla* Simon, ventral view of tibia I.

Fig. 9. *Cicurina placida* Banks, ventral view of tibia I.

Fig. 10. *Cicurina idahoana* Chamberlin, epigynum dissected, showing atrium (*atr.*), receptaculum (*rec.*), bursa (*bur.*), connecting canal (*c. c.*), and fertilization duct (*f. d.*).

Fig. 11. *Cicurina placida* Banks, external view of epigynum.

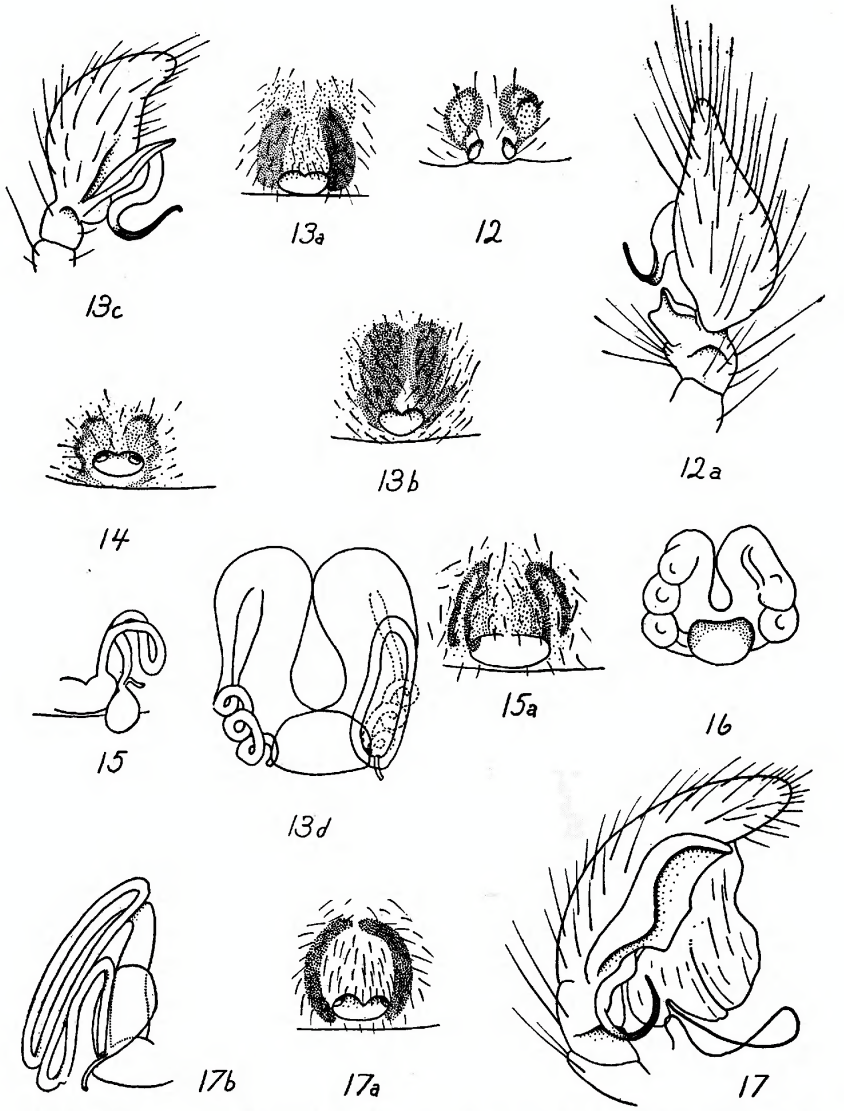

Fig. 12, 12*a*. *Cicurina pallida* Keyserling; 12, epigynum; 12*a*, palus of male.

Fig. 13*a–d*. *Cicurina brevis* Emerton; 13*a* and 13*b*, external views of epigyna of two different specimens; 13*c*, palpus of male; 13*d*, epigynum of female dissected, showing on the left side only the bursa and connecting canal, on the right with the receptaculum also.

Fig. 14. *Cicurina bryantae*, n. sp., epigynum of female.

Fig. 15, 15*a*. *Cicurina tersa* Simon; 15, one side of dissected epigynum, with receptaculum reflected posteriorly; 15*a*, external view of epigynum.

Fig. 16. *Cicurina cicurea* Fabricius, epigynum.

Fig. 17, 17*a–b*. *Cicurina pusilla* Simon; 17, palpus of male; 17*a*, external view of epigynum; 17*b*, one side of dissected epigynum.

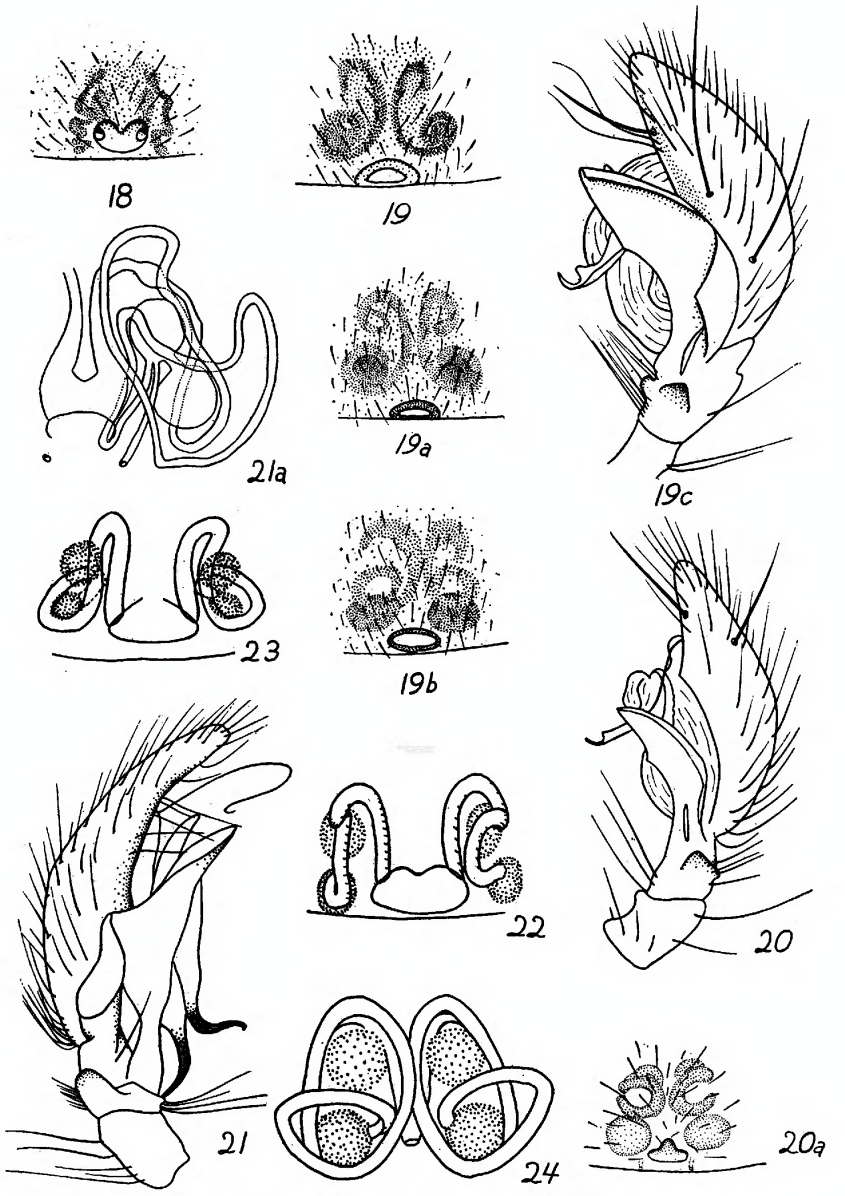

Fig. 18. *Cicurina atomaria* Simon, epigynum.

Fig. 19, 19*a–c*. *Cicurina simplex* Simon; 19, 19*a*, and 19*b*, external views of the epigynum of three different specimens; 19*c*, palpus of male.

Fig. 20, 20*a* *Cicurina idahoana* Chamberlin; 20, palpus of male; 20*a*, external view of epigynum.

Fig. 21, 21*a*. *Cicurina robusta* Simon; 21, palpus of male; 21*a*, half of a dissected epigynum.

Fig. 22. *Cicurina gertschi*, epigynum.

Fig. 23. *Cicurina schultzi*, epigynum.

Fig. 24. *Cicurina davisi*, epigynum.